

**REMARKS**

The courtesies extended to the undersigned by Examiner Lele during a personal interview conducted on August 13, 2003 are greatly appreciated. During the interview, the Official Action dated July 25, 2003 was discussed. This response and amendment is being submitted to place this second divisional reissue application in condition for allowance.

In the Official Action dated July 25, 2003:

1. Claim 33 was indicated as allowed;
2. Claims 31, 32 and 48 through 51 were rejected under 35 USC 112, second paragraph, as being indefinite because:

Claims 31 and 32 allegedly should make clear which computing device disclosed in the specification (microprocessor 34 or portable computer 36) is being described in the corresponding claim but claims 31 and 32 do not make this clear, and

Claim 48 allegedly does not indicate which “data processor” and which “application” program (disclosed in the specification) is being referred to by the claim;

3. Claims 34 through 47 were rejected under 35 USC 112, first paragraph, for failing to comply with the enablement requirement, because

Claims 34, 40 and 44 recite separate “data transmit”, “data receive” and “control” lines that are allegedly not specifically described in Applicant’s specification, and

Claims 40 and 44 recite "text" messages that are allegedly not specifically described in Applicant's specification;

4. Claims 48 and 49 were rejected under 35 USC 102 in view of Labedz '867; and
5. Claims 50 and 51 were rejected under 35 USC 103(a) in view of Labedz '867 and in further view of Goldman '652.

As discussed during the interview, and confirmed below, the undersigned Attorney of Record respectfully requests re-examination based on the amended claims and based on the traversal of certain rejections as set forth below.

In particular, with respect to the rejection of claim 31, the undersigned indicated that both microprocessor 34 and portable computer 36 were capable of performing the function described in claim 31 attributed to the claimed "computing device" and that it was intended that the claim encompass either one or both of the computing devices (34 and/or 36). For example, note that frame 2 of the computer program microfiche attached to the specification as filed and referred to at col. 1, lines 5 and 6 and at col. 13, lines 7 through 15 ('281 spec), indicates that standardized Microsoft ® programming language was used. (See hard copy of frame 2, Attachment A). Portable computer 36 is disclosed as generating control signals that are transferred to interface circuit 28 (containing microprocessor 34) for purposes of commanding the microprocessor 34 to generate the necessary signals to cause the cellular interface 30 to place appropriate dialing instructions in the form of eight bit parallel control signals onto the cellular bus 26 to cause the transceiver to connect with the desired call destination, col. 11, lines 30 through 54 ('281 spec). Portable computer 36 communicates with interface circuit 28 through an RS 232 serial interface 38 (Fig. 1 and col. 5, line 67 through col. 6, line 6, '281 spec). Thus, both microprocessor 34 (directly) and portable computer 36 (indirectly through interface circuit 28 including microprocessor 34) operate to supply dialing instructions (formatted in accordance with a standardized computer data communication protocol) to the cellular transceiver 12 after the signals are reformatted in accordance with a standardized cellular network operating protocol

(for example, AMPS) as described in claim 31. The undersigned respectfully requests that the Examiner withdraw the rejection of claim 31 based on 35 USC 112, second paragraph.

With respect to claim 32, the undersigned noted during the interview that Section 112, second paragraph does not require claims to be narrowly directed to the specific embodiment disclosed in the specification. More particularly, claim 32 calls for

A cellular telephone data transmission apparatus, comprising

- a. a cellular telephone transceiver for accessing a cellular wireless network for sending and receiving voice and data signals over a cellular telephone network, the cellular telephone transceiver operating in different modes including a call placement mode and a data transceiving mode;
- b. a computing device including a memory sufficient to allow the computer device to operate as a portable computer, the computing device operating to send and receive data over the cellular telephone network when the cellular transceiver is operating in the data transceiving mode, and
- c. a circuit connected with the cellular telephone transceiver and the computing device for determining when the cellular telephone transceiver is operating in the data transceiving mode and causing the computing device to send and receive data over the cellular telephone network only when the transceiver is operating in the data transceiving mode.

The specific componentry disclosed in the specification of the subject application that provides support for the limitations of claim 32 would include the transceiver 12 and elements of interface 28 especially including microprocessor 34 when implementing the computer program set forth in the microfiche appendix identified at col. 1 lines 5 and 6 ('281 spec). However, it was not intended that the claim be limited to such specific componentry. As described in Fig. 3 and at col. 11, lines 30 through 64 ('281 spec), microprocessor 34 functions, when implementing

the BRIDGSUB routine disclosed in the microfiche appendix, to check the state of the cellular bus and operates to cause call instructions to be sent and subsequently to transceive data over the bus only when the microprocessor determines that the cellular bus is in a condition suitable for data transfer. Claim 32 was not drafted to describe the exact circuitry (interface 28 including microprocessor 34 implementing the program set forth in the microfiche appendix) but rather was intended to be broader in scope to encompass variations of this circuitry and functionality as broadly described in the claims. The fact that claim 32 is broad does not render it indefinite under 35 USC 112, second paragraph. The undersigned requests the Examiner to withdraw his rejection of claim 32.

With respect to the rejection of claim 48 based on 112, second paragraph, claim 48 has been amended to change “data processor” to “microprocessor” to respond to the Examiner’s request for appropriate correction. Claim 48 is now believed to be in condition for allowance.

With respect to the rejection of claims 34 through 39 based on 35 USC 112, first paragraph (for lack of support for separate plural control lines, a data transmit line and a data receive line), the Examiner’s attention is directed to the following portions of the specification

Col. 5, lines 14 through 21 which states that “control signals between the transceiver 12 and the control unit 24 should be on an eight bit parallel party line bus and that the analog signals, should be a differential signal with a nominal -20dBV level using a 24 wire interconnecting cable. *A very complete description of the AMPS system is provided in 'The Bell System Technical Journal', Vol. 58, No. 1, pp 1-269.*” (emphasis added- a copy of the cited article is attached wherein a “mobile subscriber set” is described in detail on pages 123 through 143 including separate control lines, a transmit line and a receive line extending between an AMPS transceiver and control unit/handset are described, Figs. 4 and 9)

Col. 5, lines 26 through 51 (“281 spec) which describes how the disclosed components are organized in a unique way to allow the control signals and analog signals, generated

under the control of microprocessor 34, to be placed on the AMPS cellular bus in a manner that is compatible with the cellular bus requirements

Col. 1, lines 5 and 6 and col. 13, lines 7 through 15 ('281 spec) which state that microprocessor 34 operates to implement the computer program set forth in the microfiche appendix. (Note that col. 13, line 7, the number "32" was changed to -- 34 -- to correct an obvious typographic error.)

Col. 11, lines 30 through 64 ('281 spec) which states that control signals are provided to cellular bus 26 by cellular interface 30 ("eight bit parallel control signals to dial the phone number," col. 11, lines 49 through 54-'281 spec) and further states that the BRIDGSUB routine operates to cause data to be transmitted only after the "data lines" are found not to be in use.

Note further that microfiche program (for example, frame 30, Attachment B) specifically describes pin connections to an AMPS bus having separate data lines wherein one is an "input" and another is an "output".

It should be further noted that claim 35 (Attachment C) of the first divisional reissue (Re 37,141) of the subject original patent (No. 4,697,281) describes separate control lines, a data input line and a data receive line and was found to be supported by the specification prior to issuance of Re 37, 141. Clearly, the specification as originally filed includes specific reference to separate plural control lines, a data input line and a data receive line and describes via the above passages, the microfiche program and the detailed circuit diagrams and the description contained in the drawings and written description all that is required for a person of ordinary skill to practice the inventions claimed in claims 34 through 39. Reconsideration and withdrawal of the rejection of claims 34 through 39 based on 35 USC 112, first paragraph is respectfully requested.

Claims 40 through 45 have been amended to replace "text messages" with -- data -- as was agreed to during the interview of August 13, 2003. The specification, drawings and

Appendix of the subject application describes the transfer of data using the disclosed circuitry including a computer implemented program, interface circuitry 28 and cellular transceiver 12. Note also, for example, col. 6, lines 39 through 47 and col. 8, line 5 through col. 13, line 15 ('281 spec). With this amendment the rejection of claims 40 through 47 based on 35 USC 112, first paragraph, are no longer applicable and its withdrawal is respectfully requested.

As noted above, claim 48 has been amended to change "data processor" to "microprocessor" to respond to the Examiner's request for appropriate correction.

With respect to the rejections of claims 48 through 51 based on Labetz '876 and the combination of Labetz '876 and Goldman '652, the undersigned is in the process of collecting information and documentary evidence sufficient to support a Declaration under Rule 131. As noted to the Examiner, conception of the invention disclosed in the subject application occurred prior to the filing date (July 13, 1984) of the Labetz '876 patent and work on an actual reduction to practice also commenced prior to the earliest filing date of the Labetz '876 application. As evidence of diligence during the reduction to practice (actual and constructive), the first application directed to the subject matter of the subject invention was filed on September 10, 1984. The second frame (Attachment A) of the microfiche Appendix notes that the first version of the computer program implemented by microprocessors 34 and 48 was completed on November 4, 1984 and another version on June 25, 1985. The undersigned will submit a Rule 131 Declaration as soon as the originals of the documentary evidence can be assembled and reviewed by the inventor, Mr. O'Sullivan.

With respect to the informalities noted by the Examiner, a draft supplemental declaration (copy attached) has been prepared and is being reviewed by Mr. O'Sullivan. This declaration notes at least one error that occurred that necessitated the filing of this second divisional reissue application. The supplemental declaration will also provide the current mailing address including ZIP Code of the inventor.

With respect to the requirement of a written consent of all assignees owning an undivided interest in the patent, an appropriate Consent by the Assignee, Form PTO/SB/53 has been

executed on behalf of MLR, LLC by its President and Director, Charles M. Leedom, Jr. the undersigned Attorney of Record. The Consent was filed with this Response. Also attached is a copy of a Statement Under 37 CFR 3.73(b), Form PTO/SB/96 that was previously submitted in this application on October 2, 2002. The 3.73(b) Statement documents by citation of the relevant recorded assignments that the entire right, title and interest in this application and the parent chain of applications and patent (U.S. Patent No. 4,697,281; Re 34,034 and Re 37,141) are held by MLR, LLC.

With respect to the requirement for submission of the original Letters Patent, the Examiner's attention was directed during the interview to papers (Attachment D) including a receipt showing that the original Letters Patent (No. 4,697,281) was submitted to the PTO on September 18, 1991 in Application Serial No. 07/414,468 (now Re 34,034) and to a Notice of Allowability of the '468 application dated October 10, 1991 that acknowledged receipt by the PTO of the '281 formal Letters Patent.

In summary the status of the claims is as follows:

Original Claims 1-25 were canceled without prejudice (by the Supplemental Preliminary Amendment filed on July 24, 2002) since identical claims are present in allowed parent reissue application Serial No. 07/414,468 (now Re 34,034) of which this application is a second divisional reissue. Claims 26 through 30 were added by the Supplemental Preliminary Amendment of July 24, 2002 but these claims were cancelled and claims 31 through 51 were added by a Second Supplemental Amendment filed on November 15, 2002.

By this Response and Amendment, claims 40 through 45 and 48 have been amended. Claims 31 through 51 remain pending in this application of which claim 33 has been indicated as allowable.

This application and continuing application Ser. No. 08/436,863, filed May 8, 1995 (now Re. 37, 141), application Serial No. 07/930,251, filed August 17, 1992 (now abandoned), and

application Serial No. 07/414,468, filed Sep. 29, 1989 (now Re. 34,034) are reissues of application Ser. No. 06/839,564, filed Sep. 29, 1987, (now Pat. No. 4,697,281), which is a continuation-in-part of Ser. No. 06/786,641, filed Oct. 11, 1985, (now abandoned). A related application 06/648,945 was filed on Sept. 10, 1984.

A clean copy of the pending claims (without underlining) is submitted herewith as Attachment E. Support for the amendments to claims 40 through 45 and 48 exists in the following locations (all references are to the printed specification of Re 34,034):

col. 6, lines 39 through 47 ('281 spec); and  
col. 8, line 5 through col. 13, line 15 ('281 spec)

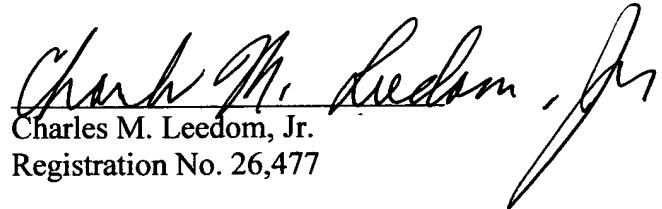
The specification has been amended to add the same language at col. 11, line 54 that was added during the prosecution of parent reissue patents, Re34,034 and Re37,141 (of which the subject reissue application is a divisional reissue application). Support for this added language is found in the BRIDGSUB routine in the microfiche Software Appendix. Addition of this language has been previously examined and approved during the prosecution of Re34,034 and Re37,141. A typographic error in col. 13, line 7 has also been corrected.

As reported during the interview of August 13, 2003, all existing litigation involving patent rights held by the assignee of this application (MLR, LLC), including the three litigations listed in Exhibit C filed with the Request Letter dated December 10, 2002 have now been settled and are dismissed or are in the process of being dismissed. Accordingly the requested expedited examination based on the existence of litigation involving patents issued on earlier corresponding applications (Re 34,034 and Re 37,141) is withdrawn. However, this application is believed to be entitled to continued "special" status since this is a divisional reissue application.

An additional IDS is being prepared and will be provided to the Examiner within the next few days.

Re-examination and allowance of this divisional reissue application is now requested.

Respectfully submitted,

  
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Registration No. 26,477

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Fax: (703) 241-5733

CLM/cml

## ATTACHMENT A

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page 0
.280
;                                     • Spectrum Cellular Comm. Corp. 1985 .
;
; AT81
; 11/4/84 - written for AT command set BRIDGE at 300 Baud
;   C. Harry M. O'Sullivan
;   written for Spectrum Cellular Communication Corp
;
;   - use M80 by microsoft for mac files
;   - use ECO-C by ecsoft for c files
;   - use L80 by microsoft to link - command line --
;   - 160 /p:0/d:c000,atb,/d:e000,eloop,ec2/s,atb/x/y/n:p/e
;
; 6/25/85 - last change
;
;
; true      equ      0ffffh
; false     equ      0
;
; MAIN module
;
;-----include EQUATE-----
;
;       cs89
;+++++
;       restart vectors
;
;       org      0000h
ares30:  di      init.all           ; disable interrupts
;       jr      init.all
;
;       org      0008h
res38:  nop
;       org      0010h
res1C:  nop
;       org      0018h
ares18:  nop
;       org      0020h
ares20:  nop
;       org      0028h
ares28:  nop
;       org      0030h
ares30:  nop
;       org      0038h
ares38:  nop
;
;       interrupt servicing vectors
;
;       org      0040h
intvec:  dw      txbint
drvvec:  dw      dbescint
;       dw      rxbint
;       dw      dbrscint
;       dw      txalint
;       dw      daescint
;       dw      rxalint
;       dw      daescint
ctcvec:  dw      ctc0.int           imode8
```

## ATTACHMENT B

```
===== o Spectrum Cellular Comm. Corp. 1985 -  
;  
:CHECKTST  
: 9/23/85 - for the AT command set BRIDGE at 300 Baud  
: c Harry M. O'Sullivan  
: written for Spectrum Cellular Communications Corp  
;  
;  
:TESTING routines for the production lines  
;  
:at this point all of the uart and clock parameters and  
:interrupt control are set and working, that is, there is  
:interrupt driven asynch console and modes, and there is  
:a system clock ticking away. PIO interrupts are disabled.  
;  
:This code requires a test jig ... jig jumps AMPS buss  
:pins 9&21, 10&22, 8&11&20 ... which are pio data lines  
: 0&1, 2&3, 5&4 &6  
;  
:REMEMBER -- pio A is input, pio B is output on PIO 1  
: -- PIO A bit 7 is 26512 enable on PIO 2  
: -- enable with 00, disable with 080h  
;  
:in addition, the switch hook (pin 19, data 7) is  
:tied through a cap to ground for possible time delay.  
;  
:first check for test jig.  
;  
check.test:  
    call    disable.pio  
    in     a,(pioaddr1)  
    and    07fh          ;isolate the least 7 bits  
    jp     nz,ct.ret      ;they should all be zeros.  
;  
;success on the above test needs to be followed by a test  
;of output a high on bit 4 and see if 5 & 4 also go low.  
;  
    ld     a,01Ch  
    out   (pioaddr1),a      ;output a high on bit 4  
    ld     a,000h  
    out   (pioaddr2),a      ;enable the 26512  
    nop  
    nop  
    ;wait a little bit  
    nop  
    in     a,(pioaddr1)  
    ld     b,a  
    ld     a,080h  
    out   (pioaddr2),a      ;turn off 26512  
    ld     a,070h          ;isolate bits 4,5 &6  
    and    b  
    sub   070h  
    jp     nz,ct.ret      ;they should all be ones  
;  
;now I'm sure that the test jig is in place  
;  
;Introduction ...  
;  
    ld     h1,msg.1  
    call    type.wait
```

## ATTACHMENT C

US RE37,141 E

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[25. The data processing interface of claim 24 wherein said processing and control means operates in response to a break in the data from said data source to repetitively provide a unique data byte to said modem means for the duration of the break in said data.]

26. A cellular computer data transmission interface device for allowing a portable computer having a conventional data output terminal to operate a mobile cellular telephone having a cellular transceiver linked via radio signals to a cellular system in response to bus-compatible control signals generated by a control unit in response to direct operator input and supplied to the cellular transceiver over a bus directly connected to the control unit and the cellular transceiver, comprising:

- (a) receiving means for receiving instructions from the portable computer;
- (b) processing means connected with said receiving means for interpreting the instructions received from the portable computer and for generating cellular transceiver control signals in response to said portable computer generated instructions;
- (c) transmitting means connected with said processing means for receiving said cellular transceiver control signals, generating bus-compatible signals from said control signals, and for transmitting said bus compatible signals to the bus through a connection between the transmitting means and the bus to cause the cellular transceiver to place a cellular telephone network call.

27. The device of claim 26 wherein the receiving means for receiving instructions from the portable computer comprises a serial data interface.

28. The device of claim 26 wherein the transmitting means comprises an eight-bit parallel input/output cellular interface.

29. A cellular telephone data transmission interface device comprising interface means to connect to a cellular radiotelephone bus sensing means connected to the interface means for sensing digital cellular telephone control signals on control lines of the cellular bus, control signal generating means connected to the interface means for generating digital cellular telephone control signals and transmitting said digital cellular telephone control signals to the control lines of the cellular bus, and processing means connected to the sensing means and to the control signal generating means for receiving and evaluating the digital cellular telephone control signals sensed by the sensing means, wherein the processing means compares the sensed digital cellular telephone control signals to expected digital cellular telephone control signal values incorporated in said processing means and selects a first mode of operation of the control signal generating means enabling data transmission when the sensed digital cellular telephone control signals correspond to the expected digital cellular telephone control signal values and selects a second mode of operation of the control signal generating means if said sensed digital cellular telephone control signals do not correspond to said expected digital cellular telephone control signal values.

30. A cellular telephone data transmission interface device for use with a mobile cellular telephone of the type that has a cellular transceiver linked via radio signals to a cellular system in response to control signals generated by a control unit and supplied to the cellular transceiver over a bus directly connected to the control unit and the cellular transceiver, which allows an analog signaling device external to the mobile cellular telephone to transmit data signals to or receive data signals from the cellular transceiver using the cellular bus, so that the analog signaling device may transmit or receive data signals using the cellular system, comprising:

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(a) bus interface means for connecting external devices to the cellular bus so that said external devices may transmit signals to or receive signals from the cellular transceiver;

(b) switching means for selectively connecting one or more external devices to the bus interface means with at least one of said external devices being the external analog signaling device, and

(c) control means for selectively controlling the operation of the switching means to connect the external analog signaling device to the bus interface means.

31. The device of claim 30 wherein the control means controls the operation of the switching means in response to a program internal to the device.

32. The device of claim 30 further comprising a computer interface means for receiving instructions from a portable computer, said interface means connected to the control means, wherein the control means controls the operation of the switching means in response to said received instructions.

33. The device of claim 30 wherein the switching means is an analog switch.

34. The device of claim 30 wherein the external analog signaling device is a modem.

35. A system for transferring data over a radio telephone network when directly connected to a radio telephone network access device for allowing external control of the radio telephone network access device, comprising:

computer means for providing and receiving data signals; modem means operably connected to the computer means for modulating data signals received from said computer means for transmission over a radio telephone network access device and for demodulating data signals received from the radio telephone network access device for transmission to the computer means;

interface means connected between said modem means and the radio telephone network access device for transmitting data signals to and receiving data signals from the radio telephone network access device, said interface means providing parallel lines for connection to said radio telephone network access device, said lines including

a data transmit line for transmitting data signals from said modem means to the radio telephone network access device,

a data receive line for transmitting data signals from the radio telephone network access device to said modem means, and

plural control lines for providing digital control signals to the radio telephone network access device to control the operation of the device.

36. A system as defined in claim 35, including a control means connected to said computer means, said interface means, and said modem means for controlling the radio telephone network access device to establish a telephone communication link and to enable data signal transmission over the radio telephone network.

37. The data transmission interface device of claim 26 wherein said receiving means further comprises data transfer means for transferring digital data between the portable computer and the cellular transceiver for transmission over the cellular transceiver to a remote station.

38. The data transmission interface device of claim 37 further comprising modem means operably connected to the data transfer means and the cellular transceiver for modulating data signals received from the portable computer for

**ATTACHMENT D**



## UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT		ATTORNEY DOCKET NO.
07/414,468	09/29/89	O'SULLIVAN		H 89R29116AL
				EXAMINER
				MATAR, A
		ART UNIT	PAPER NUMBER	
		26.1	22	
DATE MAILED: 10/07/91				

## NOTICE OF ALLOWABILITY

## PART I.

- This communication is responsive to transmittal of letters patent (9/18/91).
- All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
- The allowed claims are 1 - 25 and 35 - 42.
- The drawings filed on \_\_\_\_\_ are acceptable.
- Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [ ] been received. [ ] not been received. [ ] been filed in parent application Serial No. \_\_\_\_\_ filed on \_\_\_\_\_.
- Note the attached Examiner's Amendment.
- Note the attached Examiner Interview Summary Record, PTOL-413.
- Note the attached Examiner's Statement of Reasons for Allowance.
- Note the attached NOTICE OF REFERENCES CITED, PTO-892.
- Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

## PART II.

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
  - Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached hereto or to Paper No. 6. CORRECTION IS REQUIRED.
  - The proposed drawing correction filed on \_\_\_\_\_ has been approved by the examiner. CORRECTION IS REQUIRED.
  - Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
  - Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

## Attachments:

- Examiner's Amendment
- Examiner Interview Summary Record, PTOL- 413
- Reasons for Allowance
- Notice of References Cited, PTO-892
- Information Disclosure Citation, PTO-1449
- Notice of Informal Application, PTO-152
- Notice re Patent Drawings, PTO-948
- Listing of Bonded Draftsmen
- Other

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A PROFESSIONAL CORPORATION

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This will acknowledge receipt of the following:

1. Transmittal Of Letters Patent and Interview Summary Letter;
2. Original U.S. Letters Patent 4,697,281;
3. Interview Summary

In re Patent Application  
HARRY M. O'SULLIVAN  
Serial No.: 07/414,468  
Filed: September 29, 1988  
For: CULLULAR TELEPHONE DATA COMMUNICATION SYSTEM  
AND METHOD



Docket: 89-R291-USA-L (0301-20)  
CML:ERS/gh 9/18/91

(HAND CARRIED)

9/19/91  
9/20/91

**ATTACHMENT E**

31. A vehicular wireless voice and data communication system, comprising

- a. a cellular telephone transceiver mounted within a vehicle for accessing a cellular telephone network operating in accordance with a standardized cellular network operating protocol to send and receive voice and data signals over a cellular telephone network, the cellular telephone transceiver including circuitry specifically adapted to cause the cellular telephone transceiver to respond to cellular transceiver control signals formatted in accordance with a standardized cellular network operating protocol specific to the cellular telephone network;
- b. a computing device, including a memory sufficient to allow the computing device to be used in the manner of a portable computer, operable to generate transceiver control signals to control communication over the cellular wireless network from within the vehicle, the control signals being formatted in accordance with a standardized computer data communication protocol that differs from the standardized cellular network operating protocol implemented by the cellular telephone transceiver, and
- c. circuitry for connecting the cellular telephone transceiver and the computing device to allow transceiver control signals, generated by the computing device and formatted in accordance with the standardized computer data communication protocol, to be implemented by the cellular telephone transceiver using the standardized cellular network operating protocol.

32. A cellular telephone data transmission apparatus, comprising

- a. a cellular telephone transceiver for accessing a cellular wireless network for sending and receiving voice and data signals over a cellular telephone network, the cellular telephone transceiver operating in different modes including a call placement mode and a data transceiving mode;

b. a computing device including a memory sufficient to allow the computer device to operate as a portable computer, the computing device operating to send and receive data over the cellular telephone network when the cellular transceiver is operating in the data transceiving mode, and

c. a circuit connected with the cellular telephone transceiver and the computing device for determining when the cellular telephone transceiver is operating in the data transceiving mode and causing the computing device to send and receive data over the cellular telephone network only when the transceiver is operating in the data transceiving mode.

33. A combined portable computing and cellular voice and data communication device, comprising

a. a cellular telephone transceiver for accessing a cellular telephone network for either voice or data communication, the cellular transceiver operating in accordance with a standardized cellular network operating protocol to send and receive voice and data signals over a cellular telephone network, the cellular telephone transceiver including circuitry specifically adapted to cause the cellular telephone transceiver to respond to cellular transceiver control signals formatted in accordance with the standardized cellular network operating protocol specific to the cellular telephone network;

b. a portable computer operating to generate transceiver control signals to control communication over the cellular telephone network, the control signals being formatted in accordance with a standardized computer data communication protocol that differs from the standardized cellular network operating protocol implemented by the cellular telephone transceiver, the portable computer including computer memory sufficient to allow for portable computer uses other than generating cellular telephone transceiver control signals; and

c. circuitry for connecting the cellular telephone transceiver and the portable computer to allow transceiver control signals, generated by the portable computer and formatted in accordance with the standardized computer data communication protocol, to be implemented by the cellular telephone transceiver using the standardized cellular network operating protocol,

whereby the portable computer, in one mode, may be used to originate control signals to control the operation of the transceiver to control the transceiver to allow user data processed by the portable computer to be sent over the cellular network and to allow user data to be received by the portable computer for subsequent processing by the portable computer and, in another mode, may be used for data processing functions other than control of the cellular telephone transceiver.

34. A system for transferring data between a mobile station and at least one fixed station over a cellular telephone network comprising:

a vehicular mobile radio telephone network access device capable of bidirectionally communicating voice and data between the mobile station and a fixed station;

a computer in said vehicle, the computer providing and receiving data signals;

an interface circuit connected between the computer and the vehicular mobile radio telephone network access device for transmitting data signals to and from the vehicular mobile radio telephone network access device, said interface circuit providing lines for connection to the vehicular mobile radio telephone network access device, said lines including:

a data transmit line for transmitting data signals received from the computer to the vehicular mobile radio telephone network access device;

a data receive line for transmitting data signals from the vehicular mobile radio telephone network access device to the computer; and

plural control lines for providing at least one digital control signal, including a dial control signal, to the vehicular mobile radio telephone network access device to control the operation of the device;

dialing circuit in said interface circuit connected to at least one of the control lines for allowing the computer to cause the vehicular mobile radio telephone network access device to set up a cellular call; and

a program residing in said computer, said program causing said dialing means to set up the cellular call over the radio telephone network.

35. The cellular telephone data communication system of claim 34, further including a modem operably connected to the computer for modulating data signals received from the computer for transmission over the vehicular mobile radio telephone network access device and for demodulating data signals received from the vehicular mobile radio telephone network access device.

36. The cellular telephone data communication system of claim 34 wherein said interface circuit inserts error correction bits into said data signal.

37. The cellular telephone data communication system of claim 34 wherein said data signal is packetized.

38. The cellular telephone data communication system of claim 37 wherein said packetized data signal comprises packets of variable length, said packet length adjusted according to signal quality.

39. The cellular telephone data communication system of claim 34 wherein said computer, said interface device and said vehicular mobile radio telephone network access device is powered by a vehicle battery.

40. A cellular computer data transmission system disposed in a vehicle for communicating bidirectional computer data to and from a fixed location over a cellular telephone network, the system comprising a radio transceiver for communicating on the cellular network, a computer originating and receiving data and an interface for providing a data path between the computer and the radio transceiver, the interface containing a modem for modulating and demodulating data signals for transmission on the cellular telephone network, a controller for controlling access to the cellular telephone network, and parallel signal lines between the controller and the radio transceiver including at least a transmit signal line, a receive signal line, and a control line, whereby data are communicated between the computer in the vehicle and a fixed station over the cellular network.

41. The cellular computer data transmission system of claim 40 wherein the data contain error correcting bits.

42. The cellular computer data transmission system of claim 40 wherein the data are packetized.

43. The cellular computer data transmission system of claim 42 wherein the packetized data comprise packets of variable length, the length adjusted according to error rate.

44. A vehicle mobile computer communications system comprising:

a radio transceiver means for communicating over a cellular telephone network;

a computer means running at least one application program providing and receiving data;

an interface means disposed between said computer means and said radio transceiver means, said interface means containing a modem and a controller, said controller accessing said radio transceiver means through parallel signal lines including at least a transmit line, a receive line and plurality of control lines;

said interface means transferring data from said application program in said computer means to said radio transceiver means for transmission over said cellular telephone network and transferring received data from said radio transceiver means to said application in said computer means.

45. The vehicle mobile computer communications system of claim 44 wherein said controller in said interface means inserts error correction bits into said data.

46. The vehicle mobile computer communications system of claim 44 further comprising dial means contained in said interface means for causing said transceiver means to place a call over said cellular communications network.

47. The vehicle mobile computer communications system of claim 46 wherein said application program causes said dial means to automatically place a call over said cellular communications network.

48. A cellular telephone data communication system for communicating data over a cellular telephone system between a fixed station and a mobile station comprising:

at least one mobile radio transceiver coupled to a microprocessor, said mobile radio transceiver capable of bidirectionally communicating voice and data between said mobile station and said fixed station, said data processor capable of executing at least one application program;

said application program causing said mobile radio transceiver to establish communication with said fixed station upon the occurrence of a predetermined event, said application program then sending data to said fixed station.

49. The cellular telephone data communication system of claim 48 further comprising an interface disposed between said radio transceiver and said data processor, said interface allowing said data processor to control said radio transceiver.

50. The cellular telephone data communication system of claim 49 wherein said interface inserts error correction bits into said data.

51. The cellular telephone data communication system of claim 48 wherein said data is packetized.

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REISSUE APPLICATION DECLARATION BY THE INVENTOR		Docket Number (Optional) 301-415
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I hereby declare that:

Each inventor's residence, mailing address and citizenship are stated below next to their name.  
 I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 4,697,281 granted September 29, 1987 and for which a reissue patent is sought on the invention entitled

Cellular Telephone Data Communication System and Method

the specification of which

 is attached hereto.

was filed on April 17, 2001 as reissue application number 09/835,464  
 and was amended on July 24, 2002; November 15, 2002 and August 20, 2003  
 (If applicable)

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 385(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.

I verify believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

by reason of a defective specification or drawing.

by reason of the patentee claiming more or less than he had the right to claim in the patent.

by reason of other errors.

At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:

Applicant failed to claim a vehicular wireless voice and data communication system including a cellular transceiver mounted in a vehicle combined with a computing device as described in claim 31. This is a broadening reissue because claim 31 is directed to vehicular aspects of the original invention without including all the limitations of at least one claim issued in US 4,697,281; Re 34,034 and Re 37,141 of which this application is a reissue and a divisional reissue.

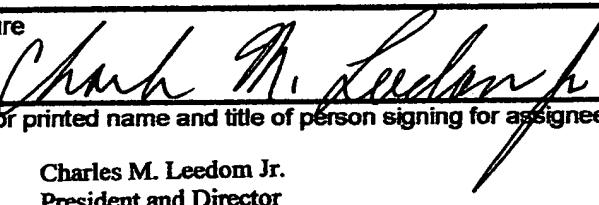
[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)		Docket Number (Optional) 301-415																									
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.																											
Note: To appoint a power of attorney, use form PTO/SB/81.																											
Correspondence Address: Direct all communications about the application to:																											
<input type="checkbox"/> Customer Number: <span style="border: 1px solid black; display: inline-block; width: 200px; height: 1.2em; vertical-align: middle;"></span>																											
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 2px;"><input checked="" type="checkbox"/> Firm or Individual Name</td> <td colspan="3" style="padding: 2px;">Charles M. Leedom Jr.</td> </tr> <tr> <td style="padding: 2px;">Address</td> <td colspan="3" style="padding: 2px;">6524 Truman Lane</td> </tr> <tr> <td style="padding: 2px;">Address</td> <td colspan="3" style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;">City</td> <td style="padding: 2px;">Falls Church</td> <td style="padding: 2px;">State</td> <td style="padding: 2px;">VA</td> </tr> <tr> <td style="padding: 2px;">Country</td> <td colspan="3" style="padding: 2px;">USA</td> </tr> <tr> <td style="padding: 2px;">Telephone</td> <td style="padding: 2px;">703 241 0165</td> <td style="padding: 2px;">Fax</td> <td style="padding: 2px;">703 241 5733</td> </tr> </table>				<input checked="" type="checkbox"/> Firm or Individual Name	Charles M. Leedom Jr.			Address	6524 Truman Lane			Address				City	Falls Church	State	VA	Country	USA			Telephone	703 241 0165	Fax	703 241 5733
<input checked="" type="checkbox"/> Firm or Individual Name	Charles M. Leedom Jr.																										
Address	6524 Truman Lane																										
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Country	USA																										
Telephone	703 241 0165	Fax	703 241 5733																								
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.																											
Full name of sole or first inventor (given name, family name)		Harry M. O'Sullivan																									
Inventor's signature		Date																									
Residence		Citizenship USA																									
Mailing Address																											
320 South Citrus Street, Apt. 221, West Covina, CA 91791																											
Full name of second joint inventor (given name, family name)																											
Inventor's signature		Date																									
Residence		Citizenship																									
Mailing Address																											
Full name of third joint inventor (given name, family name)																											
Inventor's signature		Date																									
Residence		Citizenship																									
Mailing Address																											
<input type="checkbox"/> Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.																											

<b>REISSUE APPLICATION: CONSENT OF ASSIGNEE; STATEMENT OF NON-ASSIGNMENT</b>		Docket Number (Optional) 301-415
This is part of the application for a reissue patent based on the original patent identified below.		
Name of Patentee(s) Harry M. O'Sullivan		
Patent Number 4,697,281	Date Patent Issued September 29, 1987	
Title of Invention Cellular Telephone Data Communication System and Method		
<p>1. <input checked="" type="checkbox"/> Filed herein is a statement under 37 CFR 3.73(b). (Form PTO/SB/96)</p> <p>2. <input type="checkbox"/> Ownership of the patent is in the inventor(s), and no assignment of the patent is in effect.</p>		
One of boxes 1 or 2 above must be checked. If multiple assignees, complete this form for each assignee. If box 2 is checked, skip the next entry and go directly to "Name of Assignee".		
The written consent of all assignees and inventors owning an undivided interest in the original patent is included in this application for reissue.		
The assignee(s) owning an undivided interest in said original patent is/are <u>MLR, LLC</u> and the assignee(s) consents to the accompanying application for reissue.		
Name of assignee/inventor (if not assigned)		
Signature 	Date <u>Aug. 20, 2003</u>	
Typed or printed name and title of person signing for assignee (if assigned) Charles M. Leedom Jr. President and Director		

This collection of information is required by 37 CFR 1.172. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 6 minutes to complete, including the gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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This will acknowledge receipt in re filing of

1. Revocation of Power of Attorney and Appointment of New by Assignee- 1 page
2. Statement under 37 CFR 3.73(b)- 2 pages

In re Patent Application of

Inventor(s): Harry M. O'Sullivan

Serial No. 09/835,464

Filed: April 17, 2001

For: Cellular Telephone Data Communication System and Method

Docket: 740301- 415

CML/cml

Date: October 2, 2002

Hand Delivered

Mailed

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**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: MLR, LLCApplication No./Patent No.: 09/835,464Filed/Issue Date: 4/17/2001Entitled: Cellular Telephone Data Communication System and MethodMLR, LLC, a Virginia limited liability corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

- the assignee of the entire right, title, and interest; or
- an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

A.  An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel       , Frame       , or for which a copy thereof is attached.

OR

B.  A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: Dana Verrill To: Spectrum Cellular Communications Corporation, Inc.  
The document was recorded in the United States Patent and Trademark Office at Reel 4475, Frame 668, or for which a copy thereof is attached.
2. From: Harry M. O'Sullivan To: Spectrum Cellular Communications Corporation, Inc.  
The document was recorded in the United States Patent and Trademark Office at Reel 4535, Frame 905-906, or for which a copy thereof is attached.
3. From: Spectrum Cellular Communications Corporation To: Spectrum Cellular Corporation  
The document was recorded in the United States Patent and Trademark Office at Reel 5864, Frame 528-534, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet.

Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

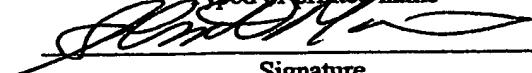
The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

9-26-02

Date

Salvatore Marino

Typed or printed name



Signature

Chief Executive Officer

Title

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B.  (Cont). A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

4. From: Spectrum Cellular Corporation To: Spectrum Information Technologies, Inc.  
The document was recorded in the United States Patent and Trademark Office at  
Reel 5854, Frame 522-527, or for which a copy thereof is attached.
5. From: Spectrum Information Technologies, Inc. To: MLR Partners  
The document was recorded in the United States Patent and Trademark Office at  
Reel 10327, Frame 981-984, or for which a copy thereof is attached.
6. From: MLR Partners To: MLR, LLC  
The document was recorded in the United States Patent and Trademark Office at  
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